

IN THE CLAIMS:

1-14 (Previously canceled)

15. (Currently Amended) A method for diagnosing an infection with *E. chaffeensis* in a patient comprising the steps of:

- (a) providing a serum sample from the patient;
- (b) providing one or more of the following: polypeptide

i.) an outer membrane protein of *E. chaffeensis* or an immunoreactive fragment thereof, wherein said purified outer membrane protein is selected from the group consisting of the OMP-1 protein, the OMP-1R protein, the OMP-1S protein, the OMP-1T protein, the OMP-1U protein, the OMP-1V protein, the OMP-1W protein, the OMP-1X protein, the OMP-1Y protein, the OMP-1Z protein, and the OMP-1H protein,

ii) an outer membrane protein of *E. canis* or an immunoreactive fragment thereof wherein said outer membrane protein is selected from the group consisting of the P30 protein or a variant thereof, the P30a protein, the P30-1 protein, the P30-2 protein, the P30-3 protein, the P30-4 protein, the P30-5 protein, the P30-6 protein, the P30-7 protein, the P30-8 protein, the P30-9 protein, the P30-11 protein, and the P30-13 protein;

(c) contacting the serum sample with the outer membrane protein or immunoreactive fragment thereof; and

(d) assaying for the formation of a complex between antibodies in the serum sample and the protein or immunoreactive fragment thereof, wherein formation of said complex is indicative of infection with *E. chaffeensis*.

16. (Currently amended) The method of claim 5 wherein said polypeptide protein is the P30 protein, ~~a variant of the P-30 protein~~, or an antigenic fragment of the P30 protein.

17. (Currently amended) The method of claim 6 15 wherein the polypeptide-protein has an amino acid sequence which is at least 95% identical to amino acid 33 through amino acid 224 of the sequence, SEQ ID NO:32, shown in Fig. 19B.

18. (Currently amended) The method of claim 6 15 wherein said ~~polypeptide~~ protein has an amino acid sequence comprising amino acid 26 through amino acid 281 of the sequence, SEQ ID NO:2, shown in FIG 3B.

19. (Currently amended) A method for diagnosing an infection with *E. canis* in a Canidae patient comprising the steps of:

(a) providing a serum sample from the patient ;

(b) providing a purified polypeptide of claim 9 outer membrane of *E. canis* or a variant thereof, or an immunoreactive fragment thereof; wherein said outer membrane protein is selected from the group consisting of ii) an outer membrane protein of *E. canis* or an immunoreactive fragment thereof wherein said outer membrane protein is selected from the group consisting of the P30 protein or a variant thereof, the P30a protein, the P30-1 protein, the P30-2 protein, the P30-3 protein, the P30-4 protein, the P30-5 protein, the P30-6 protein, the P30-7 protein, the P30-8 protein, the P30-9 protein, the P30-11 protein, the P20-12 protein, and the P30-13 protein ;

(c) contacting the serum sample with the outer membrane protein; and

(d) assaying for the formation of a complex between antibodies in the serum sample and the polypeptide protein or immunoreactive fragment thereof, wherein formation of said complex is indicative of infection with *E. canis*.

20. (Withdrawn from consideration)

24. (Previously added) The method of claim 15 wherein the polypeptide is an antigenic fragment of SEQ ID NO:32.

25. (Previously added) A method for diagnosing an *E. canis* infection in an animal comprising:

a) contacting a serum sample from the animal with an *E. canis* P30 protein or an antigenic fragment of the *E. canis* P30 protein, wherein said *E. canis* P30 protein comprises amino acid 26 through amino acid 288 of SEQ ID NO:32, and

b) assaying for the formation of complex between antibodies in the serum sample and the *E. canis* protein or the antigenic fragment of the *E. canis* P30 protein, wherein formation of said complex is indicative of infection with *E. canis*.

26. (Previously added) The method of claim 25 wherein said antigenic fragment comprises amino acid 33 through amino acid 224 of SEQ ID NO. 32.

27. (Withdrawn from consideration).

28. (Previously added) A kit for diagnosing *E. canis* in an animal, said kit comprising the *E. canis* P30 protein, an antigenic fragment of the *E. canis* P30 protein, or both.

29. (Currently amended) The kit of claim ~~27~~ 28 wherein said antigenic fragment comprises amino acid 33 through amino acid 224 of SEQ ID NO. 32.

30. (Currently amended) The kit of claim ~~27~~ 28 further comprising a biomolecule for detecting interaction between the reagent and antibodies in a bodily sample of the animal.

Claims 15-30 are in the application. By the present amendment, claims 20 and 27 are hereby withdrawn from consideration as being drawn to a non-elected invention. Claims 15 and 16 are hereby amended to recite the outer membrane proteins that are used to diagnose *E. chaffeensis*, *E. canis*, or both. Support for the amendments are found in original claims 9 and 13. Claims 16-18, which depend from claim 15, are amended to make the wording consistent with claim 15. Claims 29-30 are amended to depend from claim 28, which also cites a kit, rather than from claim 27, which recites an antibody.

As the amendment and new claim add no new matter, Applicants respectfully request entry of the present amendment.

Respectfully submitted,

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